# COLLIDER ACCELERATOR SHUTDOWN SCHEDULE

R. Zaharatos – April 14, 2003

## SHUTDOWN PERIOD: 0900hrs WEDNESDAY, APRIL 16 – 0900HRS THURSDAY, APRIL 18, 2003

**AGS – CONTROLLED ACCESS ENTRIES – 1030-1600HRS**

**BOOSTER – CONTROLLED ACCESS ENTRIES – 1000-1400HRS**

**LINAC – CONTROLLED ACCESS – NO ACCESS**

**RHIC TUNNEL RESTRICTED ACCESS PERIOD – WEDS., 0915HRS – THURSDAY, 1400HRS**

**RHIC IR'S RESTRICTED ACCESS PERIOD – SWEEPS WILL BE DONE AS WORK IS COMPLETED OR AS REQUIRED TO BE READY FOR TURN-ON**

**NSRL TUNNEL EXPERIMENTER'S SECTION – RESTRICTED ACCESS AS REQUIRED**

**PRIMAY JOBS:**

JOBS STATUS CODE: **C** complete **IP** in-process **RS** reschedule
**CAN** cancelled ***** additions

**EQUIPMENT TESTING**

**RHIC – WEDNESDAY, 1100-1900 – RAMP POWER SUPPLIES(BRUNO)**

**AGS TUNNEL**

1 F10 wiring sleeve – HP survey and smears for future job planning
2 AC Dipole – inspect/check magnet(Bm. Comp.)
3 J10 Beam Dump water sys. – change bag filter and install DP switch and gauge
4 RF Station D – replace air filter
5 RF Station IJ – replace feedback amp.

**AGS EXTERNAL**

1 AC Dipole – test horizontal power amplifier(Bm. Comp.)
2 Investigate problem with AGS-GT-Generator(Ctrls. Grp.)
3 Siemens – take measurement of L4 cubicle area with vendor for new switches for transferring between West. and Siemens transformer
4 Investigate problem with Gamma-TR controller(Ctrls. Grp.)
5 Substation 631 – test power factor correctors – 15KV(Nehring/PE)
6 Vacuum – A-10/E18/H10, replace ion pump power supplies/HV cards

**BOOSTER TUNNEL**

1 A6 RF water – remove measure flow and install flow control valve(6hrs)
2 Vacuum – check Ti pumps: A5, B6a, C3c, C8, D3b, E8, F6

**BOOSTER EXTERNAL**

1 BPM's(Bldg. 914) – phase match cables(RF Grp., requires Booster LOTO)
2 Repair leaking flow switch for DH1-5 P. S.(Water Sys. Grp./930)
3 Remove Reference Quad measure flows
4 Booster Main Mag. P.S. – replace switches on timing decoder board with wire jumpers in Eurocard power supply interface chassis
5 Investigate problem with CDC.B.SYNCLK(Ctrls. Grp.)

**NSRL**

1 Set-up jobs in experimenter's tunnel section(Phillips)
   A. Target area – instrumentation set-up

**ATR LINE**

1 Proton Radiography – cabling for experimental set-up
2 PTR experiment magnets check out(Fes)
3 Vacuum/W sect. – vent/remove beam tube in section W1 or 2 for rigging and reinstall(Scaduto)

**LINAC EXTERNAL**

1 Change 7835 Cavity in Mod 6
2 Repair RF PSI regulator
3 Vacuum HEBT 2/3 – start turbo's and condition ion pumps(A10 Hse.)

**RHIC TUNNEL**

1 P.S.'s – repairs(See List – RHIC POWER SUPPLIES)
2 Roman Pots in sectors 1 & 2 – administrative controls testing(Bm.Inst.)
3 CAD CES – relocate remaining 2 network switches located in alcoves(Gould) – 16 of 18 completed
4 Review of air conditioning capacities/requirements in alcoves 1A, !C, 3A, and 11C (R. Diaz and P.E.)
5 RF – troubleshoot BA3.2 PA
6 BRAHMS – vacuum: close and disconnect G1-SVX and G2-SVX valves(Beavis)
7 Vacuum – turbo maintenance

**RHIC EXTERNAL**

1 BRHAMS – modification to water make-up system in 1002
2 PHOBOS – unclog temperature transmitter in 1010
3 RF/1004A – update firmware in V113 MADCd for 4a-rfy1 and 4a-rfb1
4 Connect 4 racks of IR power supplies(12) to UPS(2hrs/Magoulas)

## RHIC POWER SUPPLLIES(Bruno)

### Ice Ball Checks

Ice ball teams to be named.
Possible repairs outstanding: Check I-O2Q9, it looked like the ice was starting to catch up to the heater, we may need to add a fan next time. Why is the thermostat of I-10D8Q9 on the flange, we may move it to the tree if no one has any objections.

**1004B Q6 and Q7 Time Constant Work**
Try to have a new current reg card ready for yo4-qf6 and yo4-qd7

**Q89 Time Constant Work**
Try to have a wider BW q89 high gain card ready to test.

## Corrector Power Supplies: See Table below

1. Start checking corrector p.s. fans and rack fans since not many correctors to do.

| **Corrector P.S.** | **Problem** **On all of these check AC connections and DC connections at the magnet and power supply.** | **Comments – What was really done- What was found** | ***Serial Number*** |
|---|---|---|---|
| Yi3-th13-ps | Tripped on error fault a few times then stopped. Voltage and current look very noisy. Check AC and DC connections but don't swap out p.s. unless you find something wrong in the tunnel | | |
| Bi4-th7-ps | Tripped on overvoltage a few times. Check AC and DC connections. Swap out p.s. if nothing is found to be loose. | | |
| Bi8-th12-ps | Tripped to OFF state. Replace with p.s. that has new micro and R and C mod. | | |
| Bo7-tv13-ps | Trips on error signal. Swap out, check AC and DC connections. | | |
| Yi2-tv4-ps | Does not show local on pet page when you put into Local. Investigate, possibly needs a new node card cable, try installing one, I think we have them in the trailer, check with Brian. Low priority. We probably should not touch it at all. Don't touch it yet. | | |

## Magnet Work

Ceramic Feedthrough cleaning in sector 3 where ground fault was found.

Tq QPAIC in 1010A-Check J24

**We may replace this cable – do not replace cable, it looks like replacing permit module fixed problem.**
Permit Bypass Chassis in 1008B
**Wing & Someone need to check it out, readback doesn't look right**

**<u>Spin Rotator p.s. OFF problem and other work</u>**

1. We may need to work in alcoves 5C, 7A, 7C and 9A if rotator OFF problem returns. The p.s.'s are yo5-rot3-1.4-ps, bo6-rot3-1.4-ps, yi6-rot3-2.3-ps, yi7-rot3-2.3-ps, and yo8-rot3-2.3-ps. we may need a short 15 minute access before the next maintenance day if the problem returns to connect some node card cables. See document saved as "RotatorOFFproblem4x10x03.doc" for details.
2. Label the rest of the circuit breakers. Someone should do this.

**IR Power Supplies**

1. Remove resistor packs in yi10-q89-qp and bi9-q89-qp and replace both with original resistor packs.******
2. bo2-qd1-ps shows an AC phase flt when there is a QLI. If there is time take a look at this.
3. In 1010A, if there is time we may want to check more tq power supplies for shorted IGBT's by looking at the AC current during a turn ON. Looked at yo9-tq4, 5, 6. yi10-tq4, 5, 6 and bo10-tq4. Only yo9-tq4-ps was shorted. Yo9-tq4 has been swapped out.
4. Possibly swap out firing card of y8-dh0-ps.
5. Screw in more 3u chassis cards. 1012A done. Half of 1004B done and some of 1002B done. Some done at 6b.
6. Replace broken fans in b12-q7, b12-dh0, yo4-qd7 and y-qtrim. All had one bad fan in the rear DC compartment.*******
7. Put main p.s. filter material in rear doors of tq racks.
8. Swap out fiber optic card for b2-dhx and see if glitches in error go away. We may want to look on the front of the p.s. to make sure this is real first.
9. bi8-tq4-ps error seems unusually low, we may want to swap out the current regulator card. Think about.

**Tunnel Work**

1. Tape down floor fans in the tunnel that cool magnet trees.******

## QPA Work

1. Start replacing all QPA D connector hardware?? (b2-dh0-qp, yo8-qf8-qp and yo8-qd1-qp done) No One.

**Gamma-T Power Supplies**

Go into alcoves and tighten AC connections of Gamma-T's in 3C, 7A, 7C, 9A. Someone should do.

## Snake and Spin rotator p.s. Work

Label the rest of the circuit breakers. Someone should do.

## Valve Box Work

1. Need to replace flashers at top of valve boxes for 2b and 6b.
2. Check light control chassis at 10A because no green lights work.
3. Check green light above blue valve box in 1002B.
4. Light control chassis in 1008B needs to be fixed. Opto logic is reversed.

## Sector 9 Lead Flow Temp Experiments

George and Cryo.

## ATR Power Supplies

1. Run X-ARC90 in voltage mode. Not done.
2. Test SWM p.s. setpoint buffer. Not done.
3. Tom Nehring may swap circuit breakers 42 and 44, probably won't happen anytime soon. Not done.
4. If ground fault comes back on WQ3 p.s. try something else. AFB board was replaced 9:50 Wed 3/5/03. Problem has not returned as of now.
5. XARC90 and YARC90 phase sequence relay jumpered out. Decide what to do for fix. YARC90 phase sequence relay probably still good because LED lights. Not done.